

SEQUENCE LISTING

<110> Raab, David
Graf, Marcus
Notka, Frank
Wagner, Ralf

<120> Method and Device for Optimizing a Nucleotide Sequence for the Purpose of Expression of a Protein

<130> B&B-135

<140> 10/539,208

<141> 2005-06-17

<150> PCT/EP03/14850

<151> 2003-12-23

<150> DE 10260805.9

<151> 2002-12-23

<160> 32

<170> PatentIn version 3.3

<210> 1

<211> 435

<212> DNA

<213> Homo sapiens

<400> 1
atgtggctgc agagcctgct gctcttgggc actgtggcct gcagcatctc tgcacccgcc 60
cgctcgccca gcccagcac gcagccctgg gagcatgtga atgccatcca ggaggcccg 120
cgtctcctga acctgagtag agacactgct gctgagatga atgaaacagt agaagtcac 180
tcagaaatgt ttgacctcca ggagccgacc tgcctacaga cccgcctgga gctgtacaag 240
cagggcctgc ggggcagcct caccaagctc aagggcccct tgaccatgat ggccagccac 300
tacaagcagc actgccctcc aaccccgaa acttcctgtg caaccagat taccaccttt 360
gaaagtttca aagagaacct gaaggacttt ctgcttgta tcccctttga ctgctgggag 420
ccagtccagg agtag 435

<210> 2

<211> 435

<212> DNA

<213> Homo sapiens

<400> 2
atgtggctgc agagcctgct gctgctggga acagtggcct gtagcatctc tgcccctgcc 60
agaagcccta gccctagcac acagccttgg gagcacgtga atgccatcca ggaggccagg 120
agactgctga acctgagcag agatacagcc gccgagatga acgagaccgt ggaggatgat 180
agcgagatgt tcgacctgca ggagcctaca tgcctgcaga cccggctgga gctgtataag 240
cagggcctga gaggctctct gaccaagctg aagggcccc tgacaatgat ggccagccac 300

tacaagcagc actgccctcc tacccttgag acaagctgcg ccaccagat catcaccttc	360
gagagcttca aggagaacct gaaggacttc ctgctggtga tccccttcga ttgctgggag	420
cccgtgcagg agtag	435

<210> 3
 <211> 489
 <212> DNA
 <213> Homo sapiens

<400> 3	
atgagaattt cgaaaccaca tttgagaagt atttccatcc agtgctactt gtgtttactt	60
ctaaacagtc attttctaac tgaagctggc attcatgtct tcattttggg ctgtttcagt	120
gcagggcttc ctaaaacaga agccaactgg gtgaatgtaa taagtgattt gaaaaaaatt	180
gaagatctta ttcaatctat gcatattgat gctactttat atacggaaag tgatgttcac	240
cccagttgca aagtaacagc aatgaagtgc tttctcttgg agttacaagt tatttcactt	300
gagtccggag atgcaagtat tcatgataca gtagaaaatc tgatcatcct agcaaacaac	360
agtttgtctt ctaatgggaa tgtaacagaa tctggatgca aagaatgtga ggaactggag	420
gaaaaaaata ttaaagaatt tttgcagagt tttgtacata ttgtccaaat gttcatcaac	480
acttcttag	489

<210> 4
 <211> 489
 <212> DNA
 <213> Homo sapiens

<400> 4	
atgcggatca gcaagcccca cctgaggagc atcagcatcc agtgctacct gtgcctgctg	60
ctgaacagcc acttcttgac agaggccggc atccacgtgt ttatcctggg ctgcttctct	120
gccggcctgc ctaagacaga ggccaactgg gtgaacgtga tcagcgacct gaagaagatc	180
gaggacctga tccagagcat gcacatcgac gccaccctgt acacagagag cgacgtgcac	240
cctagctgta aggtgaccgc catgaagtgc ttcttgctgg agctgcaggt gatcagcctg	300
gagagcggcg atgccagcat ccacgacacc gtggagaacc tgatcatcct ggccaacaac	360
agcctgagca gcaacggcaa tgtgaccgag agcggctgca aggagtgtga ggagctggag	420
gagaagaaca tcaaggagtt cctgcagagc ttcgtgcaca tcgtgcagat gttcatcaac	480
accagctag	489

<210> 5
 <211> 426
 <212> DNA
 <213> Mus musculus

<400> 5	
atgtggctgc agaatttact tttcctgggc attgtggtct acagcctctc agcaccacc	60

cgctcaccca tcactgtcac ccggccttgg aagcatgtag aggccatcaa agaagccctg	120
aacctcctgg atgacatgcc tgtcacattg aatgaagagg tagaagtcgt ctctaacgag	180
ttctccttca agaagctaac atgtgtgcag accgcctga agatattcga gcaggggtcta	240
cggggcaatt tcaccaaact caagggcgcc ttgaacatga cagccagcta ctaccagaca	300
tactgcccc caactccgga aacggactgt gaaacacaag ttaccaccta tgcggatttc	360
atagacagcc ttaaaacctt tctgactgat atccccttg aatgcaaaaa accaggccaa	420
aaatag	426

<210> 6
 <211> 426
 <212> DNA
 <213> Mus musculus

<400> 6	
atgtggctgc agaacctgct gttcctgggc atcgtggtgt acagcctgag cgtccccacc	60
aggagcccca tcaccgtgac caggccctgg aagcacgtgg aggccatcaa ggaggccctg	120
aacctgctgg acgacatgcc cgtgaccctg aacgaggagg tggagggtgt gagcaacgag	180
ttcagcttca agaagctgac ctgctgtcag accaggctga agatcttcga gcagggcctg	240
aggggcaact tcaccaagct gaagggcgcc ctgaacatga ccgccagcta ctaccagacc	300
tactgcccc ccacccccga gaccgactgc gagaccagc tgaccaccta cgccgacttc	360
atcgacagcc tgaagacctt cctgaccgac atccccttcg agtgcaagaa gcccggccag	420
aagtag	426

<210> 7
 <211> 279
 <212> DNA
 <213> Mus musculus

<400> 7	
atgaaggtct ccaccactgc cttgctgtt cttctctgta ccatgacact ctgcaaccaa	60
gtcttctcag cgccatatgg agctgacacc ccgactgcct gctgcttctc ctacagccgg	120
aagattccac gccaatcat cgttgactat tttgaaacca gcagcctttg ctcccagcca	180
ggtgtcattt tcctgactaa gagaaaccgg cagatctgcg ctgactccaa agagacctgg	240
gtccaagaat acatcactga cctggaactg aatgcctag	279

<210> 8
 <211> 279
 <212> DNA
 <213> Mus musculus

<400> 8	
atgaaggtga gcaccacagc tctggctgtg ctgctgtgca ccatgaccct gtgcaaccag	60

gtgttcagcg ctccttacgg cgccgatacc cctacagcct gctgcttcag ctacagcagg 120
aagatcccca ggcagttcat cgtggactac ttcgagacca gcagcctgtg ttctcagccc 180
ggcgtgatct tcctgaccaa gcggaacaga cagatctgcg ccgacagcaa ggagacatgg 240
gtgcaggagt acatcaccga cctggagctg aacgcctag 279

<210> 9
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Optimal DNA sequence corresponding to hypothetical amino acid sequence.

<220>
<221> misc_feature
<222> (42)..(42)
<223> n = a, t, g, or c

<400> 9
garcarttya thathaaraa yatgttyath athaaraayg cn 42

<210> 10
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Hypothetical amino acid sequence.

<400> 10
Glu Gln Phe Ile Ile Lys Asn Met Phe Ile Ile Lys Asn Ala
1 5 10

<210> 11
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 11
garcartty 9

<210> 12
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 12
carttyath 9

<210> 13
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 13
ttyathath

9

<210> 14
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 14
athathaar

9

<210> 15
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 15
athaaraay

9

<210> 16
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 16
aaraayatg

9

<210> 17
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Combination DNA Sequence for amino acid SEQ ID NO: 10.

<400> 17
aayatgtty

9

<210> 18
<211> 9

<212> DNA
 <213> Artificial Sequence
 <220>
 <223> Combination DNA Sequence for amino acid SEQ ID NO: 10.
 <400> 18
 atgttyath 9

<210> 19
 <211> 9
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Combination DNA Sequence for amino acid SEQ ID NO: 10.
 <400> 19
 ttyathath 9

<210> 20
 <211> 9
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Combination DNA Sequence for amino acid SEQ ID NO: 10.
 <400> 20
 athathaar 9

<210> 21
 <211> 9
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Combination DNA Sequence for amino acid SEQ ID NO: 10.
 <400> 21
 athaaraay 9

<210> 22
 <211> 9
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Combination DNA Sequence for amino acid SEQ ID NO: 10.
 <220>
 <221> misc_feature
 <222> (9)..(9)
 <223> n = a, t, g, or c
 <400> 22
 aaraaygc 9

<210> 23
 <211> 238
 <212> PRT
 <213> Aequorea victoria

<300>
 <308> GenBank M62654
 <309> 1993-04-26
 <313> (1)..(238)

<400> 23

Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
 1 5 10 15

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
 20 25 30

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
 35 40 45

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
 50 55 60

Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
 65 70 75 80

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
 85 90 95

Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Ser Arg Ala Glu Val
 100 105 110

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
 115 120 125

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu Tyr Asn
 130 135 140

Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
 145 150 155 160

Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
 165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
 180 185 190

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
 195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu Phe Val
 210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
 225 230 235

<210> 24
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Sequence motif

<220>
 <221> misc_feature
 <222> (10)..(10)
 <223> n = a, t, g, or c

<400> 24
 yyyyyyyyn ag

12

<210> 25
 <211> 11
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Sequence motif

<400> 25
 wwwatttaww w

11

<210> 26
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Sequence motif

<220>
 <221> misc_feature
 <222> (7)..(7)
 <223> n = a, t, g, or c

<400> 26
 aaggagnatg

10

<210> 27
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Sequence motif

<220>		
<221>	misc_feature	
<222>	(7)..(7)	
<223>	n = a, t, g, or c	
<400>	27	
	aggaggnatg	10
<210>	28	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Sequence motif	
<220>		
<221>	misc_feature	
<222>	(10)..(10)	
<223>	n = a, t, g, or c	
<400>	28	
	taasgaggtg dtg	13
<210>	29	
<211>	10	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Sequence motif	
<220>		
<221>	misc_feature	
<222>	(7)..(7)	
<223>	n = a, t, g, or c	
<400>	29	
	agagagnatg	10
<210>	30	
<211>	11	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Sequence motif	
<220>		
<221>	misc_feature	
<222>	(8)..(8)	
<223>	n = a, t, g, or c	
<400>	30	
	aaggaggnat g	11

<210> 31
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence motif

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = a, t, g, or c

<400> 31
aacggaggna tg

12

<210> 32
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence motif

<220>
<221> misc_feature
<222> (10)..(10)
<223> n = a, t, g, or c

<400> 32
aagaaggaa atg

13